



Robert Greene Sterne  
Jorge A. Goldstein  
David K.S. Cornwell  
Robert W. Esmond  
Tracy-Gene G. Durkin  
Michele A. Cimbala  
Michael B. Ray  
Robert E. Sokohl  
Eric K. Steffe  
Michael Q. Lee  
John M. Covert  
Robert C. Millionig  
Donald J. Featherstone  
Timothy J. Shea, Jr  
Michael V. Messinger  
Judith U. Kim  
Jeffrey T. Helvey

Eldora L. Ellison  
Donald R. Banowit  
Peter A. Jackman  
Brian J. Del Buono  
Mark Fox Evans  
Vincent L. Capuano  
Elizabeth J. Haanes  
Michael D. Spedch  
Kevin W. McCabe  
Edward W. Yee  
Virgil Lee Beaston  
Theodore A. Wood  
Joseph S. Ostroff  
Jason D. Eisenberg  
Tracy L. Muller  
Jon E. Wright  
LuAnne M. DeSantis

Ann E. Summerfield  
Helene C. Carlson  
Cynthia M. Bouchez  
Timothy A. Doyle  
Gaby L. Longworth  
Lori A. Gordon  
Laura A. Vogel  
Bryan S. Wade  
Bashir M.S. Ali  
Shannon A. Carroll  
Anbar F. Khai  
Michelle K. Holoubek  
Marsha A. Rose  
Scott A. Schaller  
Lei Zhou  
Young Tang  
Christopher J. Walsh

W. Blake Coblenz  
James J. Pohl  
John T. Haran  
Mark W. Rygiel  
Michael R. Malek  
Carla Ji-Eun Kim  
Doyle A. Siever  
Alexandra K. Pechhold  
C. Matthew Rozier  
Robert A. Schwartzman  
Bryan L. Skelton  
Ulrike Winkler  
  
Registered Patent Agents  
Karen R. Markowicz  
Matthew J. Dowd  
Katrina Yujian Pei Quach  
Julie A. Heider

Mita Mukherjee  
Scott M. Woodhouse  
Peter A. Socarras  
Jeffrey K. Mills  
Danielle L. Letting  
Lori Brandes  
Steven C. Oppenheimer  
Aaron S. Lukas  
Gaurav Asthana  
  
Of Counsel  
Edward J. Kessler  
Kenneth C. Bass III  
Marvin C. Guthrie  
  
\*Admitted only in Maryland  
\*Admitted only in Virginia  
\*Practice Limited to  
Federal Agencies

IFW

February 15, 2007

WRITER'S DIRECT NUMBER:  
(202) 772-8782  
INTERNET ADDRESS:  
BCOBLNT@SKGF.COM

Art Unit 1711

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Attn: Mail Stop Amendment

Re: U.S. Utility Appl. No. 10/535,624  
U.S. Nat'l. Stage of Int'l Appl. No. PCT/KR2002/002195  
Int'l Filing Date: November 22, 2002  
For: **Antimicrobial Peptide Isolated from Halocynthia Aurantium**  
Inventors: In-Hee LEE *et al.*  
Our Ref: 2393.0010000/JUK/WBC

Sir:

Transmitted herewith for appropriate action are the following documents:

1. First Supplemental Information Disclosure Statement Under 37 C.F.R. § 1.97(b);
2. PTO/SB/08B (3 pages) citing twenty-two (22) references (NPL25-NPL46);
3. Copies of twenty-two (22) cited references (NPL25-NPL46); and
4. One (1) return postcard.

It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier.

In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Commissioner for Patents  
February 15, 2007  
Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

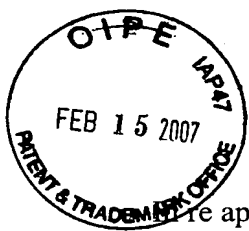
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "William B. Coblentz", written over the printed name.

William B. Coblentz  
Attorney for Applicants  
Registration No. 57,104

JUK/WBC:cpn  
Enclosures

641727\_1.DOC



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

re application of:

In-Hee LEE *et al.*

Appl. No.: 10/535,624

Int'l Filing Date: November 22, 2002

For: **Antimicrobial Peptide Isolated  
from Halocynthia Aurantium**

Confirmation No.: 1731

Art Unit: 1711

Examiner: *To Be Assigned*

Atty. Docket: 2393.0010000/JUK/WBC

**First Supplemental Information Disclosure Statement  
Under 37 C.F.R. § 1.97(b)**

*Mail Stop Amendment*

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

Listed on accompanying IDS Form, PTO/SB/08B, are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. The numbering on this First Supplemental Information Disclosure Statement is a continuation of the numbering in Applicants' Information Disclosure Statement filed on January 30, 2006 in connection with the above-captioned application.

Copies of documents **NPL25** to **NPL46** are submitted.

Where the publication date of a listed document does not provide a month of publication, the year of publication of the listed document is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the month of publication is not in issue. Applicants have listed publication dates on the attached IDS Forms based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

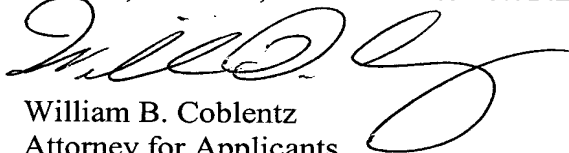
This First Supplemental Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits. No statement or fee is required.

It is respectfully requested that the Examiner initial and return a copy of the enclosed IDS Forms, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

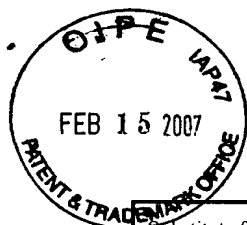


William B. Coblenz  
Attorney for Applicants  
Registration No. 57,104

Date: 2/15/07

1100 New York Avenue, N.W.  
Washington, D.C. 20005-3934  
(202) 371-2600

639331\_1



Equivalent of Form PTO/SB/08B (09-06)

Approved for use through 03/31/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

# **FIRST SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

## **Complete if Known**

Application Number	10/535,624
Int'l Filing Date	November 22, 2002
First Named Inventor	In-Hee LEE
Art Unit	1711
Examiner Name	To Be Assigned
Attorney Docket Number	2393.0010000/JUK/WBC

Sheet 1 of 3

## **NON PATENT LITERATURE DOCUMENTS**

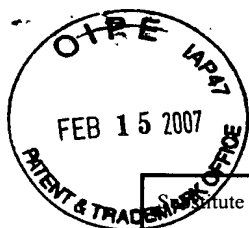
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	NPL25	BELLAMY, W., <i>et al.</i> , "Antibacterial spectrum of lactoferricin B, a potent bactericidal peptide derived from the N-terminal region of bovine lactoferrin," <i>J. Appl. Bacteriol.</i> 73:472-479, Blackwell Scientific Publications (1992)	
	NPL26	BERRIDGE, N.J., "Preparation of the Antibiotic Nisin," <i>Biochem. J.</i> 45:486-493, Portland Press (1949)	
	NPL27	BLONDELLE, S.E., and HOUGHTEN, R.A., "Hemolytic and Antimicrobial Activities of the Twenty-Four Individual Omission Analogues of Melittin," <i>Biochemistry</i> 30:4671-4678, American Chemical Society (1991)	
	NPL28	CASTEELS, P., <i>et al.</i> , "Apidaecins: antibacterial peptides from honeybees," <i>EMBO J.</i> 8:2387-2391, Oxford University Press (1989)	
	NPL29	COCIANCICH, S., <i>et al.</i> , "Novel inducible antibacterial peptides from a hemipteran insect, the sap-sucking bug <i>Pyrrhocoris apterus</i> ," <i>Biochem. J.</i> 300:567-575, Portland Press (1994)	
	NPL30	DIMARCQ, J.-L., <i>et al.</i> , "Insect immunity: expression of the two major inducible antibacterial peptides, defensin and dipterocin, in <i>Phormia terranova</i> ," <i>EMBO J.</i> 9:2507-2515, Oxford University Press (1990)	
	NPL31	FRANK, R.W., <i>et al.</i> , "Amino Acid Sequences of Two Proline-rich Bactenecins," <i>J. Biol. Chem.</i> 265:18871-18874, The American Society for Biochemistry and Molecular Biology, Inc. (1990)	
	NPL32	FROHM, M., <i>et al.</i> , "The Expression of the Gene Coding for the Antibacterial Peptide LL-37 Is Induced in Human Keratinocytes during Inflammatory Disorders," <i>J. Biol. Chem.</i> 272:15258-15263, The American Society for Biochemistry and Molecular Biology, Inc. (1997)	
	NPL33	GALLO, R.L., <i>et al.</i> , "Identification of CRAMP, a Cathelin-related Antimicrobial Peptide Expressed in the Embryonic and Adult Mouse," <i>J. Biol. Chem.</i> 272:13088-13093, The American Society for Biochemistry and Molecular Biology, Inc. (1997)	
	NPL34	GANZ, T., <i>et al.</i> , "Defensins--Natural Peptide Antibiotics of Human Neutrophils," <i>J. Clin. Invest.</i> 76:1427-1435, The American Society for Clinical Investigation, Inc. (1985)	

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



Equivalent of Form PTO/SB/08B (09-06)

Approved for use through 03/31/2007. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>FIRST SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/535,624
				Int'l Filing Date	November 22, 2002
				First Named Inventor	In-Hee LEE
				Art Unit	1711
				Examiner Name	To Be Assigned
Sheet	2	of	3	Attorney Docket Number	2393.0010000/JUK/WBC

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume number, publisher, city and/or country where published		T <sup>2</sup>
	NPL35	GIBSON, B.W., <i>et al.</i> , "Novel Peptide Fragments Originating from PGL <sup>a</sup> and the Caerulein and Xenopsin Precursors from <i>Xenopus laevis</i> ," <i>J. Biol. Chem.</i> 261:5341-5349, The American Society of Biological Chemists, Inc. (1986)		
	NPL36	KHAN, A.A., <i>et al.</i> , "Recombinant Bactericidal/Permeability-Increasing Protein (rBPI <sub>21</sub> ) in Combination with Sulfadiazine Is Active against <i>Toxoplasma gondii</i> ," <i>Antimicrob. Agents Chemother.</i> 43:758-762, American Society for Microbiology (1999)		
	NPL37	LAMBERTY, M., <i>et al.</i> , "Solution Structures of the Antifungal Heliomicin and a Selected Variant with both Antibacterial and Antifungal Activities," <i>Biochemistry</i> 40:11995-12003, American Chemical Society (October 2001)		
	NPL38	LEMAITRE, B., <i>et al.</i> , "A recessive mutation, immune deficiency ( <i>imd</i> ), defines two distinct control pathways in the <i>Drosophila</i> host defense," <i>Proc. Natl. Acad. Sci. USA</i> 92:9465-9469, National Academy of Sciences (1995)		
	NPL39	NAKAMURA, T., <i>et al.</i> , "Tachyplesin, a Class of Antimicrobial Peptide from the Hemocytes of the Horseshoe Crab ( <i>Tachyplesus tridentatus</i> )," <i>J. Biol. Chem.</i> 263:16709-16713, The American Society for Biochemistry and Molecular Biology, Inc. (1988)		
	NPL40	OPPENHEIM, F.G., <i>et al.</i> , "Histatins, a Novel Family of Histidine-rich Proteins in Human Parotid Secretion," <i>J. Biol. Chem.</i> 263:7472-7477, The American Society for Biochemistry and Molecular Biology, Inc. (1988)		
	NPL41	PARK, C.B., <i>et al.</i> , "Structure--activity analysis of buforin II, a histone H2A-derived antimicrobial peptide: The proline hinge is responsible for the cell-penetrating ability of buforin II," <i>Proc. Natl. Acad. Sci. USA</i> 97:8245-8250, National Academy of Sciences (2000)		
	NPL42	SELSTED, M.E., <i>et al.</i> , "Indolicidin, a Novel Bactericidal Tridecapeptide Amide from Neutrophils," <i>J. Biol. Chem.</i> 267:4292-4295, The American Society for Biochemistry and Molecular Biology, Inc. (1992)		
	NPL43	STEINER, H., <i>et al.</i> , "Sequence and specificity of two antibacterial proteins involved in insect immunity," <i>Nature</i> 292:246-248, Macmillan Journals Ltd. (1981)		
	NPL44	YANG, S.-T., <i>et al.</i> , "Selective cytotoxicity following Arg-to-Lys substitution in tritrypticin adopting a unique amphipathic turn structure," <i>FEBS Lett.</i> 540:229-233, Elsevier Science B.V. (April 2003)		

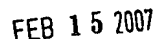
Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



Approved for use through 03/31/2007. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

*(Use as many sheets as necessary)*

***Complete if Known***

Application Number	10/535,624
Int'l Filing Date	November 22, 2002
First Named Inventor	In-Hee LEE
Art Unit	1711
Examiner Name	<i>To Be Assigned</i>
Attorney Docket Number	2393.0010000/IJK/WBC

Sheet	3	of	3
-------	---	----	---

## NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume number, publisher, city and/or country where published
--------------------	-----------------------	---

NPL45

NPL46

ZASLOFF, M., "Magainins, a class of antimicrobial peptides from *Xenopus* skin: Isolation, characterization of two active forms, and partial cDNA sequence of a precursor," *Proc. Natl. Acad. Sci. USA* 84:5449-5453, National Academy of Sciences (1987)

ZHAO, C., *et al.*, "Identification of a new member of the protegrin family by cDNA cloning," *FEBS Lett.* 346:285-288, Federation of European Biochemical Societies (1994)

639130 1

Examiner  
Signature

Date  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

*If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.*